Natural Rearing Newsletter ©

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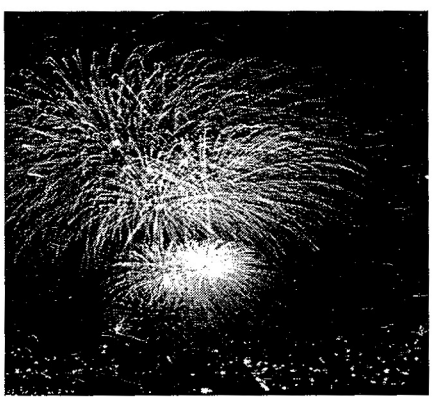
FOR THOSE THAT CHOOSE TO THINK FOR THEMSELVES

From The Desk Of: MARINA ZACHARIAS



HAPPY NEW YEAR

As I look back on 1997, I am very pleased to see a greater interest in alternative health care. Even the mainstream "managed health plans" are at least looking at the possibility of including natural medicine in their coverage.

The membership in the American Holistic Veterinarian Association has grown significantly in the year 1997.

In our own publication we were able to bring you a new breakthrough in the treatment of OCD without surgical intervention. This protocol has proven to be extremely successful throughout the year and I am confident will continue to provide us with a powerful weapon in the decades to come. This important discovery was made through breeder networking and you should all take a little bow, for credit belongs to you rather than the "scientific" community.

It wasn't all roses last year and we still have the "Codex" battle to face in the near future. The people of Canada are fighting their regulators strongly and recently the strong arm tactics of the Health Protection Branch have lessened. We'll just have to wait and see what this year brings. I am still cautiously optimistic that the grass roots people will eventually win this battle. (1)

The Immune System--Part 3

In the last issue we covered a lot of technical mumbo-jumbo for you to refer to in the event that someone tries to mesmerize you with fancy terms. Granted, the immune system is complex and some kind of label has to be used to distinguish its many, many parts. For the specialist this information is vital. For the average person, it is overwhelming and can be confusing. At least you now have an awareness that mounting an immune response is not totally dependent on vaccination.

The most common reason to vaccinate is to prevent infections. Now that you have the background, lets take a simplified look at the body's natural defense system for prevention of infectious disease.

Microbes attempting to get into the body must first move past the body's external armor. The skin and the membranes lining the body's gateways not only pose a physical barrier, they are also rich in scavenger cells and IgA antibodies.

Next, invaders must escape a series of **NONSPECIFIC** defenses, which are ready to attack, without regard for any specific antigen markers. These include patrolling scavenger cells, natural killer (NK) cells, and complement.

Microbes that cross the nonspecific barriers must then confront specific weapons tailored just for them. Specific weapons, which include both antibodies and cells, are equipped with singular receptor structures that allow them to recognize and interact with their designated targets.

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In addition, Mother Nature designed the system so that once an infectious microbe has invaded and been vanquished, the next exposure will be met with a more rapid, stronger attack of such intensity that the body is literally immune to any future infection of the same disease. When both the humoral and cell mediated systems are functioning at their optimum, infectious disease doesn't stand a chance!

The sad thing is that in today's modern world the average dog doesn't stand a chance of having an immune system that is operating at optimum levels. Starting with inherited genetic defects and adding an onslaught of nutritional imbalances or deficiencies, hormonal imbalances, exposure to toxic or noxious substances, exposure to infectious agents and drugs, etc., has markedly increased the frequency of ill health that we are seeing in our canine companions. In my opinion, the great "experiment" of this century in providing "nutrition" from a bag and "immunity" from a needle, has been a gigantic failure. **Unless we are prepared to work with nature and purposely support and enhance the immune system, we have no right to expect good health for our animals.**

Let's take a look at some of the components of the immune system and discuss some of the things that are important for maintaining and enhancing the system.

In considering the primary organs of the immune system it should now be obvious that first and foremost is the thymus. The thymus gland shows maximum development shortly after birth. During the aging process, the thymus gland undergoes a process of shrinkage or involution. The reason for this involution appears to be that the thymus gland is extremely susceptible to free radical and oxidative damage. Antioxidants such as vitamin C, vitamin E, selenium, zinc and beta-carotene can prevent thymic involution and enhance cell mediated immune functions. (See V2-Issue 7 for more on the thymus).

The thymus gland also releases several hormones such as thymosin, thymopoetin and serum thymic factor, which regulate many immune functions. Low levels of the hormones in the blood are associated with depressed immunity and an increased susceptibility to infection. Many nutrients function as important cofactors in the manufacture, secretion and function of thymic hormones. Deficiencies of any one of these nutrients results in decreased thymic hormone action and impaired immune function. Zinc, vitamin B6 and vitamin C are perhaps the most critical. Supplementation with these nutrients has been shown to increase thymic hormone function and cell mediated immunity.

Next we need to consider the importance of the lymphatic system. Approximately one-sixth of the entire body consists of the space between cells. Collectively this space is referred to as the "interstitum" and the fluid within the space is referred to as the interstitial fluid. This fluid flows into the lymphatic vessels and becomes the lymph.

Lymphatic vessels usually run parallel to arteries and veins, draining waste products from tissues and transporting the lymph to lymph nodes which filter the lymph. The cells responsible for filtering the lymph are macrophages (large cells which engulf and destroy foreign particles including bacteria and cellular debris). The lymph nodes also contain B-lymphocytes (the white blood cells which are capable of initiating antibody production in response to the presence of viruses, bacteria, yeast and other organisms).

The spleen is the largest mass of lymphatic tissue in the body. In addition to producing lymphocytes, engulfing and destroying bacteria and cellular debris, the spleen is responsible for destroying worn-out blood cells and platelets. The spleen also serves as a blood reservoir. During times of demand, such as hemorrhage, the spleen can release its stored blood and prevent shock.

Although not considered a lymphatic organ, the liver produces the majority of lymph in the body. In addition, the integrity of the lymphatic system is highly dependent on special types of macrophage (Kupffer cells) that exist in the liver. Kupffer cells are responsible for filtering bacteria, yeast (like Candida albicans) and toxic foreign compounds that are absorbed by the gastrointestinal tract. These cells, when functioning properly, are extremely effective in filtering the blood. Healthy Kupffer cells have been shown to engulf and destroy a single bacteria in less than 1/100 of a second.

Clumps of lymphoid tissue are found in many other parts of the body, especially in the linings of the digestive tract and the airways and lungs that serve as gateways to the body. These tissues include the tonsils, the adenoids, and the appendix.

Thus we can see that the "immune system" is nothing more (or less) than an integral part of natures design of the body and the dynamic interaction of all of its parts.

Obviously, a broad range of nutrients are required for immune function. There are many books, review articles and primary research papers that discuss the relationship between nutrition and the immune system.

Wholesome nutrition is a key component of maintaining a healthy immune system. You're probably tired of hearing me say this but a raw diet is unsurpassed in providing the best nutrition for both dogs and cats. Proper digestion is a requirement for optimum health, and incomplete or disordered digestion can be a major contributor to the development of many diseases. The problem is not only that ingestion of foods and nutritional substances are of little benefit when breakdown and assimilation are inadequate, but also that incompletely digested food molecules can be inappropriately absorbed into the blood stream. This can lead to various diseases and the development of food allergies. **Dogs and cats were designed to digest RAW FOODS!** Cooking and processing is totally a "man made" concept and is foreign to nature's digestive design for these animals.

The basic premise of natural rearing is to provide an animal with the best chance of having an immune system that functions at an optimal level. **THE HEART AND SOUL OF ANY NATURAL REARING PROGRAM IS AND ALWAYS WILL BE A RAW FOOD DIET !**

Thousands of years of traditional usage and more recent scientific research has shown that certain substances and approaches (generally not in the realm of conventional nedicine) can be incorporated into an immune enhancing program. In past issues of our newsletter we have provided information on many of these and will continue to do so in future issues.

For example:

- Herbal supplements and medicines such as garlic, ginsing, licorice root, echinacea, astragalus, etc. have been show to impart numerous benefits to immune function (particularly the cell-mediated branch). Now that you have the background it is more meaningful when you understand that these benefits include macrophage stimulation, increased phagocytosis, increased NK (natural killer) cell counts, increased interferon, and enhancement of delayed hypersensitivity response. A number of herbs also have direct antiviral and anti-tumor activity.
- Medicinal mushrooms such as shiitake and ganoderma, also stimulate the production of interferon and other well defined immune parameters.
- Glandular extracts, particularly thymus and spleen, have been considered potentiators of immune function by many naturopathic physicians and veterinarians and are frequently prescribed.
- Acupuncture has been found to enhance many immune parameters. It can increase the number of T cells, lymphocytes in general, T cell ratios, NK cell activity, B cells and phagocytic activity.
- Homeopathy has been used effectively to treat infections and immune deficiencies. One of the theories behind the use of "Nosodes" is that this homeopathic form of immunization provides the system with the "pattern" of a particular disease. The pattern will be stored in "memory" cells, thus preparing for a rapid immune response to that infection in the future.

In a full natural rearing program, of equal importance to immune system enhancement, is the **avoidance** of chemical toxins, drugs, vaccinations, flea collars, pills, chemical wormers, antibiotics, steroids, etc. to the greatest extent possible. Each of these has a detrimental effect on the immune system and can trigger an overload that is difficult and sometimes impossible for the body to handle.

To quote Dr. Jean Dodds, D.V.M. "Viral disease and recent vaccination with single or modified-live virus vaccines, ...are increasingly recognized contributors to immune-mediated blood disease, bone marrow failure and organ dysfunction."

Lets put a little perspective into the relative importance of the cell mediated system with a quick summary along with some percentages.

The "workers" of the immune system are various white blood cells. A lymphocyte is a specialized form of white blood cell, representing 25-40% of the total blood count, whose numbers increase during viral infection and when fighting cancer.

Lymphocytes are produced in the bone marrow and come in two basic forms. B cells mature in the bone marrow and produce antibodies to neutralize foreign cells (this is know as the humoral system). **B cells account for 10-15% of all lymphocytes.**

T cells mature in the thymus gland and react to and destroy specific invading antigens (this is known as cell-mediated immunity). **75-80% of lymphocytes are T cells.** T cells are predisposed to respond to specific foreign substances (antigens) or infections.

Natural Killer (NK) cells are a type of nonspecific, free-ranging lymphocyte that is neither a B nor T cell. Unlike other lymphocytes, NK cells are not activated by a specific antigen. They can recognize and quickly destroy <u>any</u> antigen on first contact. They have a potent cell-killing activity, being armed with an estimated 100 different biochemical poisons for destroying foreign cells. Their role is surveillance, to rid the body of aberrant or foreign cells before they can grow and produce cancer or infection. **NK cells account for 5-10% of all lymphocytes**

<u>Main Types of T-cells:</u>

Helper T cells (also known as T-4 or CD-4 cells) secrete immune proteins (particularly the interleukins and interferon) to stimulate B cells, macrophages, and activate Killer T cells. They account for 60-75% of all the T cells.

Killer T cells (T-8 or CD-8) cells bind to the specific invader and secrete enzymes to destroy it. They account for 25-30% of all T cells.

Suppressor T cells prevent excessive immune reactions by suppressing antibody activity.

If you pay close attention to the aforementioned percentages you will note that conventional vaccination attempts to stimulate B cell recognition only, or about 10% of the total lymphocytes. It ignores 90% of the overall immune system. With all the additional <u>risks</u> involved, does it really make any sense to subject an animal to this kind of questionable immune "enhancement" ??? Repeatedly???

Or does it make more sense to work on the other 90% with good nutrition and natural, non-harmful methods of enhancement ?

When I adopted the natural rearing method for my animals, I had very little of this information available. I just knew that there had to be something better than what I had been doing in the past. After many years of experience and research, I have found nothing to make me regret my decision. On the contrary, the more I learn the more convinced I become that I am truly providing my dogs with the opportunity to be "the best that they can be".

The choice is yours. I hope I have given you enough basic information to really "think for yourself" about the care and maintenance of the immune system in your animals.

FLUORIDE

This article could be titled "some things you probably don't want to know".

Picture this: your have just discovered that your 4 year old child has placed a substance in his mouth (it tastes good mom), and you read the label on the container. It says: "Do not swallow--use only a pea size amount for children under six. Warnings: Keep out of reach of children under 6 years of age. If you accidentally swallow more than used for (--normal function), seek professional help or contact a **poison control center** immediately". Do you panic? Call your doctor?

No! You probably pat him on the head and praise him for being a good boy! Why?

He just brushed his teeth. The substance is Crest toothpaste!

What about swallowing a little bit each day for the rest of your life? What about drinking it in your water? Is it safe? It must be if it has the unwavering support of the government, the American Dental Association and the American Medical Association. After all these prestigious officials wouldn't lie to the public, would they? Can you imagine the potential law suites if fluoride was recognized as a health hazard?

Independent research studies have shown that fluoride has been directly linked to: kidney and bladder disorders; bone malformation; arthritis; skin disease; calcified deposits in the aorta; interference with thyroid function, causing hypothyroidism; and weakening of the immune system; damage to connective-tissue collagen, to ligaments, tendons, bones, arteries and DNA.

In 1990 a 10 year study was completed by the federal government National Toxicology Program (a part of the Department of Health and Human Services) to rule out any possibility that fluoride causes cancer. Much to their surprise, bone tumors found in laboratory animals were found to be the direct result of fluoride ingestion. Even before the study was complete, the NTP contacted the Environmental Protection Agency to inform them **that fluoride was carcinogenic**.

There is a fascinating book titled "Fluoride, the Aging Factor" written by John Yiamouyiannis, Ph.D. that provides a wealth of information about the background and dangers of fluoride. He is a world authority on the effects of fluoridation, and the American Dental Association reportedly has advised it's pro-fluoridation speakers that "Running up against Yiamouyiannis is not recommended".

He points out that fluoride at 1 part per million or less (the amount added to drinking water) inhibits the operation of over 100 different enzymes in the cells of people living in fluoridated areas. This isn't even a controversial point: The National Academy of Sciences, the World Health Organization, and others have published lists of enzymes that are seriously inhibited at 1 part per million fluoride or even less. At levels of more than 1 part per million, fluoride accumulates in body tissues.

Since a large part of aging is the slowing of our bodies' intracellular enzymes, constant exposure to fluoridated water will literally cause premature aging!

Is Dr. Yiamouyiannis a lone voice crying in the wilderness? Not by a long shot. He and Dr. Dean Burke (Chief Chemist at the National Cancer Institute) did studies demonstrating that fluoride added to the nation's water supplies was responsible for 10,000 additional deaths from cancer per year. Other scientists attempted to refute these studies but Drs. Burke and Yiamouyiannis were able to prove them in court more than once.

Dr William Marcus was Chief Toxicologist for the Office of Drinking Water of the Environmental Protection Agency. His opinion that fluoride in drinking water was hazardous did not coincide with the official position of the EPA. He was fired from his job. He sued for reinstatement and won!

Dr. Phyllis Mullenix of Harvard University's Forsyth Research Institute (a dental research institute) published a study pointing out that fluoride was more effective than lead in reducing IQ levels in children!

A citizens' petition to prevent fluoridation of all of California's waters was co-sponsored by scientists of the EPA. In a letter of support from J. William Hirzy, Ph.D., we find the blunt statement that that the EPA scientists unanimously agree that fluoridation has **"virtually no evidence of significant benefits"**, including tooth decay, but there is **"substantial evidence of adverse health effects"** !!

If you really want to find out how the fluoride fiasco got started and the power politics behind it, I would suggest you read the book "Fluoride: the Aging Factor", available from Safe Water Foundation, 6439 Taggart Road, Delaware, Ohio, 43015, The cost is $15.00 including postage.

In our Jan/95 issue V-1 No. 2 we outlined the effects of chlorine and other substances in our water systems. Combined with this article on fluoride you should be justifiably concerned with providing a pure source of drinking water for your animals.

Again a reminder that for 'show dogs' that exhibit skin irritations after bathing, you may want to check the source of the water used (particularly at show sites) rather than blaming it on a shampoo or something else. Dermal absorption can be just as bad as drinking the water.

Also remember that an often overlooked source is the water used in filling up the tanks in a motor home. If you are doing this from a tap, please remember not to use it as drinking or bathing water.

It's a sad state of affairs when we have to worry about the very basics of sustenance, food and water, that we commonly give to our animal companions. However, it does teach us that if we truly want good health it has now become necessary to learn how to "think for ourselves" about the fundamentals of our modern lifestyle.

SUPPLEMENTS---DO YOU NEED THEM?

Q: All right already, you've convinced me and I've switched my dogs to a completely raw diet. You know, grains, veggies, raw meat, etc. You say that the best nutrition comes from food, so with all the good stuff I'm feeding do I really need to add all those supplements you talk about?

A: Good question. Let's see if we can give you enough basic information to draw your own conclusions. Obviously, a raw food diet is a high-quality basic source of nutrition. The primary role of supplements is to provide a high-quality source of preventive nutrition.

The fact that nutritional requirements will vary from breed to breed is widely accepted knowledge but it is essential to recognize that **each animal is an individual** and will vary in their genetic makeup, their endocrine activity, metabolic efficiency and nutritional needs. The size, shape, and function of glands and organs can vary greatly among individuals of the same breed. When environmental factors such as pollution, stress, age, etc. are considered, the variation in nutritional requirements for each animal becomes very broad and can differ in range from a factor of 2 to 4 times. So we are always faced with the challenge of biochemical individuality and what is "right" for one animal may or may not be "right" for another.

The next thing that must be taken into consideration is the synergistic effect of nutrition. No nutrient works alone in the body. Each is linked by enzymatic reactions and metabolic pathways to other nutrients in the cells. From previous issues of our newsletter, you know that proper enzymatic reactions follow a sequence of steps requiring multiple enzymes and cofactors along the metabolic pathway. Each step may require an adequate level of a certain nutrient to accomplish its task. If along the way, a particular step cannot be completed because of a lack of a certain nutrient, then the whole sequence fails to complete its function. In other words the nutritional chain is only as strong as its weakest link.

When added as a supplement to the diet, a nutrient such as a mineral, an amino acid, or a vitamin can provide no optimal effect unless all other associated nutrients are present in adequate levels. Understanding how nutrients work synergistically is essential to knowing how foods and supplements can work together to build health and overcome disease. **Providing animals with broad-spectrum nutritional supplements raises their nutritional reserves and improves the availability of key essential nutrients.**

The goal of a natural rearing nutrition program is to remove nutritional risk factors to maintain optimal health and prevent the onset of disease. Providing an animal with the highest quality diet is important but will not always accomplish this goal by itself. For example I give NR Seaweed Mineral Food on a regular basis to all my dogs. Minerals are constituents of all body tissues and fluids and are essential to many biologic functions. The macro-minerals are primarily provided by the basic diet (with the addition of "Cyrofood"--a raw organic bone meal) but the micro-minerals such as iodine, selenium, zinc, copper, etc. help control and regulate a wide range of biochemical reactions and are just as essential to good health. In considering the minerals, they should be looked at as a group--all necessary, in proper proportions, in a natural, absorbable form. As this particular formula was originated by Juliette de Bairacli Levy to include the best mineral content of both sea and land plants, it is testimony to ancient knowledge of the basic requirements needed before science confirmed the fundamental need for mineral supplementation.

Essential fatty acids are another vital component in any nutritional program. These fatty acids play a vital role in the structures of cell membranes. They are also involved in the synthesis of several series of prostaglandins and other eicosanoids that regulate various metabolic functions. They stimulate growth, benefit skin and hair, influence the inflammatory response, and affect the development of the nervous system, including the brain. I always use cold pressed Flax Seed Oil as a supplement for all my dogs.

Most of the vitamin requirements for dogs and cats must be supplied in the animal's diet. Many times I have heard that they do not need a vitamin C supplement because they can synthesize their own supply. While this ability to synthesize is true, the question becomes is the level adequate to meet the needs during times of stress, sickness or advanced age? Does this particular animal produce adequate levels for its personal needs? As both vitamin C and E are valuable antioxidants that protect the cells from free radical damage it just makes good sense to add these to a basic diet. I use both on a regular basis. (Note: For those of you still using some kind of kibble, you should seriously consider adding a full range multiple vitamin such as "Spectra" and of course a digestive enzyme.)

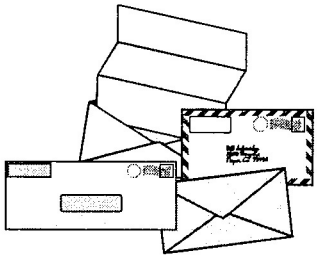
As the basic raw food diet I follow was derived from the works of J. Levy, I also follow her herbal supplement recommendations. The NR Herbal Compound, NR Daily Health, and Special Blend along with the NR Seaweed Mineral Food, combine to provide a natural synergistic source of vitamins, minerals and immune system boosters. During the last five or six years I have also been adding the glandulars "Immuplex" and "Livaplex" (particularly with my seniors) to help keep their liver and immune systems functioning at optimum levels.

Studies of nutritional supplements have been shown to increase life span. Essential nutrients in levels exceeding the basic requirements may significantly reduce degenerative conditions. They can increase the efficiency of cellular regeneration, enhance the elimination of waste products and toxic substances, and decrease the damaging effect of free radicals. Better nutrition for the cell allows all organs and systems to recover faster from stresses of pollution and deterioration that occur over time.

Do you need them? I don't know!

I can certainly tell you why I consistently use supplements and will continue to do so. I would strongly suspect that the needs of your animals are no less than mine, but only you can decide what is best for you and yours.

MAILBOX



Dateline December 2 Arizona

Dear Marina

I want to thank you for all your help with (dog's name). His mange is completely gone and his coat is starting to come back in and appears healthy.

As you know, I have been through hell with this dog. After conventional "dips" that did nothing but make him violently sick, I turned to a "holistic" vet in our area and used the prescribed homeopathic remedy Sulpher 30c. We got absolutely no results. I must admit that I was very disappointed when even the holistic vet told me she had nothing else to offer.

Fortunately a friend suggested I contact you and I am so glad I followed her advice. I was so desperate and couldn't stand the thought of having to put our loved one down to alleviate his suffering.

When I see him bouncing around like a puppy now, I can't help but say bless you. Without your help I don't know what I would have done. Thank you, thank you, thank you!

Mange can be a nasty problem and from practical experience I have found that unless it is treated aggressively, results can be disappointing. As a major part of the condition is a weakened immune system, the conventional "dip" program can exacerbate the underlying cause by adding poison as an additional challenge. Even where it "works" to alleviate the immediate problem, the overly burdened immune system can lead to all kinds of other problems. It is not uncommon to see a recurrence of mange at a later time that becomes more difficult to treat.

With respect to the homeopathic treatment, I am well aware that this is the recommended remedy for mange, but I have yet to hear from a breeder where this, by itself, has worked. Please understand that I am firm believer in homeopathy, but I also believe that there are times when we must utilize more of the tools available to us to effectively deal with a problem.

The protocol that I have seen used with consistent results calls for a combination of vitamins, herbals, glandulars and homeopathics, taken internally plus topical treatment.

Topically, lavender oil is applied directly on the affected spots. To help boost the immune system we use the combination of Immuplex (a glandular), Viola (a Chinese herb formula), the homeopathic remedies: Echinacea Comp Forte; Cutis Comp.; and Lymphomyosot. To this we add the vitamins E, B complex, C, and the mineral Zinc. In particular, the vitamin C should be a high dose (up to bowel tolerance).

It also helps a great deal if the dog can be fed a raw diet. At the very least, add as much fresh food as possible.

It's important not to end any mange treatment too soon or the risk of reoccurrence is greatly increased.

I know that this sounds like a lot but I find that if you do not go after it in this fashion, it can lead to all kinds of real trouble. This is one case where just doing a little bit (to see what works) is as bad as doing nothing.

Dateline November/97 Maryland

Dear Marina

Thank you for your help again. Our puppy is doing better. We gave him your remedies and within 20 hours he made a positive turn around. Even our vet is astounded. You are wonderful.

This was a case of a very young puppy suffering from an infection and a very extreme case of colic. The vet had more or less given up any hope of survival and the owners were desperate.

The remedies used were: Echinacea Forte, Colic, Spasm-Pain, Stomach, Fading Puppy Remedy (homeopathics); Colloidal Silver and Acidophillus; and the herbal formulas NR Tree Bark Gruel and NR Herbal Compound.

These were rushed "Next Day Air" and the breeder immediately used them per instructions. Which one did the job? I don't know for sure. When faced with a life or death situation, can we afford to take the time to try one thing at a time?

I find that I constantly have to point out that these are not drugs. Most often it takes a combination of nutrients to provide the body with the ammunition it needs to heal itself. Given the chance, the body will respond with results that never fail to "astound" conventional practitioners.

I'm glad so many alternatives exist!

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FDA APPROVES IRRADIATING BEEF

Associated Press Release---December 3, 1997:

(Ed Note: Underlines and Bold are mine)

"The meat industry won approval Tuesday to zap beef with gamma rays to kill E. Coli and other harmful bacteria.

FDA declared that the process does not make the meat radioactive and doesn't trigger other changes affecting the taste, wholesomeness or nutritional content.

We think it is safe and **we think** it is appropriate said Dr. Michael Friedman, the acting FDA commissioner.

The radiation dosage levels set by FDA are **millions of times** the amount in a typical chest X-ray but "that isn't a valid comparison" said Pat Hansen, and FDA **chemist** who coordinated the review."

Good Grief! The "think tank" boys in the meat industry have even proposed the term "cold pasteurization" be used in place of irradiation.

Way back in September 1995 (Volume 1 Issue #6) we printed an article on food radiation. I've never done this before but I feel much of the information in that article must be repeated at this time. It's just too important to count on all our ·eaders to have this back issue.

FDA policy has allowed most irradiated food to be sold to the public since 1963 without so much as a disclosure label. Surely it must be "safe" beyond any doubt or somebody would be screaming bloody murder by now. Yet the media is very, very silent about the whole subject.

Sorry folks, but it just ain't so.

If you want the full horror story about this process, I would suggest you read "The Food That Would Last Forever" by Dr. Gary Gibbs--an authority on food radiation.

It turns out that when you hit food with these enormous doses of gamma rays (usually from cobalt-80) you create molecules called "radiotoxines". The FDA calls them "radiolytic by-products" and classifies them into two categories. Known and Unknown.

The 'known' category includes such neat things as formaldehyde and benzene (yes, Charlie they are both considered carcinogens).

The 'unknown' category is described as "unique radiolytic products" which are chemical molecules that have never been characterized and are not found anywhere in ıature. (Hello immune system--here's something new you can play with !!).

Does it harm beneficial Nutrients ? Of course. About 30% of Vitamin C is destroyed. Milk is known to lose 70% of Vitamin A, B1 and B2 when radiated. Vitamins E, K, the entire B group, amino acids and essential fatty acids, are all known to be adversely affected.

Worse yet it accelerates the growth of a particularly nasty mold called "aspergillus". This mold produces the **most potent natural carcinogens**, called "aflatoxins". One study, conducted by FDA itself in 1979, demonstrated that food radiation increases aflatoxin production by more than one-hundred-fold.

So what happens when this stuff is eaten?

Animal studies are clear. When up to 35% of the lab-animal diet was radiated, feeding studies had to be abandoned because **the animals died or were unable to eat.** This fact is in FDA's final report approving radiation.

I want to emphasize that these studies should have set off alarm bells all across the country. For example:
At the University of Illinois, the Department of Medicine fed radiated food to mice. Seventeen percent had to be killed or died because of respiratory problems so severe they couldn't even move around their cages. They did autopsies. The hearts of the mice had enlarged to twice to three times normal, and in some cases had burst.

This is so often seen in animal feeding studies with radiated food that it's commonly referred to as the "hemorrhagic syndrome."

Researchers at the Medical College of Virginia fed rats radiated beef. All the male rats died of hemorrhagic syndrome within 34 days. They investigated the effect of hormones by castrating a group of male rats and then feeding them with radiated beef. They all died within 63 days--as did all the female rats.

If you think the danger only arises from a heavy diet of radiated foods, think again. In another study at the University of Michigan, researchers radiated table sugar and then stored it for months. They then made up a white-blood-cell culture with less than 1% of the sucrose and a "control" culture medium with the same amount of non-radiated sugar.

They grew white-blood-cells, lymphocytes, in both culture media. The researchers reported that the radiated culture was "extremely toxic to lymphocytes." Cell division was reduced and the chromosomes were grossly damaged--to the point that they appeared to be shattered or pulverized !! Remember that the lymphocytes themselves were never radiated but only exposed to 1% of a radiated solution!!

Exposing lymphocytes to even a slightly radiated culture medium makes them look like they'd actually been radiated themselves. The control group (non-radiated culture) were perfectly fine.

So didn't FDA know about these studies ?? This is where it gets really unbelievable. They started with 441 studies, including the foregoing.
(7)

They "accepted" 226 for further review. They further narrowed their criteria and selected only 69 for in-depth review. Of these, FDA itself reported that 32 showed adverse effects and 37 suggested safety. Then, without explanation, they eliminated all but 5 of these 69 studies, including all 32 adverse ones, and announced they'd make a decision on those five alone. Results--stamp it approved !!

So to-day not only our herbs, but our fruits, vegetables, wheat, flour, spices, nuts, seeds, peas, pork and chicken are O.K. for radiation treatment. Now it's beef.

Don't they have to label this stuff ?? The FDA requires a label only if "whole food" is radiated and then sold unchanged. But if you process it in any way, or add any other ingredient to it, **no label disclosure is required !!!**

Gut instinct alone should tell any rational person to stay away from man made molecules never before found in nature. The potential harm from radiated foods is very real and very frightening.

I don't draw much comfort from an FDA commissioner that tells me he "thinks" it is safe or from a FDA chemist that may or may not be aware of all the studies pointing out valid concerns.

It's difficult to obtain any accurate information as to how wide spread the application of radiation is at this time. Food companies are certainly not going to admit using it and the present laws are laughable. The only organization that I know of that is exclusively concerned with the issue is "Food and Water Inc."

If you choose to, they can be contacted at:
1-800-EAT-SAFE, or at
R.R. 1, Box 114, Depot Hill Road,
Marshfield, Vermont, 05658.
Tel: 804-426-3700.
Fax: 802-426-3711.

The beef industry has certainly used the E. Coli scare of the summer of 1997 to its advantage. Rather than cleaning up their act they have stampeded the FDA to approve a dubious process that the public will have no way of knowing what has been treated and what hasn't.

I know there are economics involved but who picks up the cost of the increased health care tab once irradiated beef hits the market? I suppose that any carcasses that have received an "overdose" will be sent to our friendly local rendering plant to be used for dog and cat food?

Maybe McDonalds will add a "nuclear waste" logo to their Golden Arches?

You've 'gotta' love what's going on in the food industry and wonder where it will all end.

ONE PLUS ONE EQUALS ???

Synergism: "The action of two or more substances to achieve an effect that either alone is incapable of achieving."

Synergism is a two headed coin having both a good side and a bad side. In studying the biological effects of substances, most research is based on a single, specific item. It's only recently that scientists have come to recognize that combining certain substances result in amplifying the outcome to a far greater degree then expected.

On the bad side for example, a 1976 study examined animals that were fed 2% of their diet as either red dye, sodium cyclamate, or an emulsifier (all approved at the time by the FDA). Animals fed one food additive showed no harmful effects. Animals fed two of the additives exhibited balding, scruffy fur, diarrhea, and retarded weight gain. Animals fed all three additives died within two weeks.

Recently, scientists have found that pesticides amplify one another's toxicity as much as 500 to 1,000 fold. In other words the combination increased toxicity in a logarithmic fashion rather than a simple arithmetic progression. Really makes you wonder about our food supply, doesn't it.

On the good side, the prospects of synergistic nutritional healing may hold the keys to solving many of our health problems.

Cancer research provides us with many examples of the powerful effect of combining a host of nutrients to combat this killer. Even the bad effects of chemotherapy can be ameliorated with combined nutrients.

In an animals study of rats with tumors, researchers found that animals exposed to DMBA (chemo-drug) all died. When provided a single chemo-preventive nutrient (either selenium, magnesium, vitamin C, or vitamin A), cancer incidence after DMBA exposure was cut in half. When two nutrients were combined, the cancer incidence was cut by 70%. With three nutrients the cancer incidence was cut by 80%. With four nutrients the incidence was cut by 88%.

A group of Finnish oncologists treated 18 non-randomized lung cancer patients with chemotherapy, radiation, and a collection of nutritional factors. The anticipated outcome in this group of poor prognostic patients is 1% survival at 30 months after diagnosis. However, in these nutritionally supported lung cancer patients, **44% were still alive six years after diagnosis, with half of these surviving patients in remission.**

Something in multi-nutrient synergism had provided a major boost over the anticipated outcome. So in the case of nutrition, one plus one equals ???

'Till next time, take care out there